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09JUN03 E813188-1 D10096
P01/7700 0.00-0313089.5

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1. Your reference

P60474GB

2. Patent application number

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0313089.5

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3. Full name, address and postcode of the or of each applicant (underline all surnames)

LONDON Sarah Alice
9 Hobbis Drive
Maidenhead, Berkshire, SL6 5AN

Patents ADP number (if you know it)

864 847 9001

If the applicant is a corporate body, give the country/state of its incorporation

4. Title of the invention

HOOD

5. Name of your agent (if you have one)

Parabola

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

1 Richfield Place
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Number of earlier application

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11.

I/We request the grant of a patent on the basis of this application.

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Date

PARABOLA

6 June 2003

12. Name and daytime telephone number of person to contact in the United Kingdom

John Hardwick

0118 950 9937

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HOOD

The present invention relates to hoods to be worn over a user's head. The invention particularly relates to such hoods which are
5 attached to or integral with a garment. Most particularly, the present invention relates to hoods for use by individuals who have styled hair which they do not wish to become disturbed, or some other reason why the head should not be disturbed.

10 There is a problem with current means to keep dry in rain. An umbrella requires to be held in one hand. Umbrellas also provide an impediment to the user, obstruct the vision of the user, and, in crowded rainy streets, present are a risk to the safety of both the user and others. Umbrellas obstruct the view of others at public
15 events, such as concerts or sporting occasions, for example, in a stadium. Current rain hoods tend to blow back in wind and require at least one hand to keep them in place. The present invention seeks to provide a means for keeping the hair or head dry, which does not disturb or touch the hair or head, which allows both hands to be
20 free, of utility to those pushing push chairs or carrying items, which does not impede the vision of the user, and which does not present an impediment to the visual field of others.

The cost and complexity of hair styling is such that an individual
25 takes great care to avoid disturbance to the styled hair, especially when outside. This is true in ordinary life, and even truer in the cinematographic arts such as movies and television, where characters or commentators are "prepared" by a makeup department, at great expense, perhaps for outdoor filming, television transmission or
30 video recording.

Other individuals may have medical or dental conditions where, for example, medical scaffolding is attached to the cranium to support reconstructive surgery, which also requires protection from outside
35 weather.

Under such circumstances, a hat or ordinary hood is of little use, as it bears upon the cranium of the user to disturb any styled hair or makeup, and to snag and disturb any medical or dental appliance.

- 5 The present invention seeks to provide means whereby an individual can gain protection from wind and weather without direct contact between the protecting device and the user's head.

10 The present invention consists in a hood for protecting the head of a user, said hood comprising: a flexible skin for providing weather protection for the user's head; and a foldable frame, operative to support said flexible skin; where said flexible skin is attached to said foldable frame; where said foldable frame is un-foldable to a first position where said foldable frame supports said flexible
15 skin, surrounding at least a portion of the user's head and spaced from the head of the user; and where said foldable frame is foldable to a second position where said foldable frame and said flexible skin are stowed at a second position, with said flexible skin clear of the user's head.

20

The invention further provides a hood wherein the foldable frame can comprise: a first hinge, for attachment proximate to the front of a collar on a first side of a garment; and a second hinge, for attachment proximate to the front of the collar on a second side of
25 the garment; where the foldable frame can comprise one or more frame elements, extending from said first hinge to said second hinge and pivotable there-about.

30 The invention further provides a hood wherein the foldable frame can comprise one or more substantially rigid frame members, the one or more substantially rigid frame members being pivotable about the first and second hinges between said first position and said second position.

35 The invention further provides that the one or more substantially rigid frame members can be two or more substantially rigid frame members, and that a first substantially rigid frame member can pivot

about the hinges, that the first substantially rigid frame member can comprise first and second pivots on either side thereof, and that second and subsequent substantially rigid frame members can be affixed at their ends to pivot about the first and second pivots.

5

The invention further provides a hood wherein the foldable frame can comprise one or more substantially flexible members, the one or more substantially flexible members being twistable upon themselves from the first position, where the foldable frame is in a first stable configuration and extended, to the second position, where the foldable frame assumes a second stable configuration where the foldable frame is looped upon itself.

10

The invention further provides that the one or more substantially flexible frame members can be two or more substantially flexible frame members, and that a first substantially flexible frame member can pivot about the hinges, that the first substantially flexible frame member can comprise first and second pivots on either side thereof, and that second and subsequent substantially flexible frame members can be affixed at their ends to pivot about the first and second pivots.

15

20

The invention further provides a hood wherein the first position can comprise the foldable frame, when the user is wearing the garment, supporting the flexible skin to protect the top, sides and rear of the user's head; and wherein the second position can comprise the foldable frame and the flexible skin being disposed behind the collar on the back of the garment.

25

The invention further provides a hood wherein the foldable frame can extend the flexible skin when in the first position, and wherein the foldable frame can collapse the flexible skin when in the second position.

30

The invention further provides a hood which can be removably attachable to a garment, or which can be an integral part of a garment.

35

The invention further provides a hood wherein the flexible skin can be transparent, or can be fabric.

- 5 The invention further provides a hood wherein the foldable frame can comprise plastics material.

The invention is further explained, by way of example, by the following description, to be read in conjunction with the appended
10 drawings, in which:

Figure 1 shows a side view of a first embodiment of the present invention, with the hood in the up position.

- 15 Figure 2 shows a view, from the front, of the first embodiment of the present invention, with the hood in the up position.

Figure 3 shows a front, oblique view, of the first embodiment of the present invention, with the hood in the up position.

20

Figure 4 shows a view, from the rear, of the first embodiment of the present invention, with the hood in the up position.

- 25 Figure 5 shows details of the hinge mechanism, used in the first embodiment of the present invention and otherwise visible in figures 1, 2, 3 and 4.

Figure 6 shows a detailed close up view of the hinge of Figure 5, used in the first embodiment of the present invention.

30

Figure 7 shows an oblique view of the hinge mechanism otherwise shown in Figures 5 and 6, illustrating the operational positions thereof.

- 35 Figure 8 shows a side view of the first embodiment of the present invention, with the hood in the down position.

Figure 9 shows an oblique rear view of the first embodiment of the present invention, with the hood in the down position.

5 Figure 10 shows a rear view of the first embodiment of the present invention, with the hood in the down position.

Figure 11 shows a side view of a second embodiment of the present invention, with the hood in the up position.

10 Figure 12 shows a front view of the second embodiment of the present invention, with the hood in the up position, and illustrates details of the means whereby the hood is kept in the up position.

15 Figure 13 shows a side view of the second embodiment of the present invention, with the hood in the down position.

Figure 14 shows an oblique rear view of the second embodiment of the present invention, with the hood in the down position.

20 Figure 15 shows a first stage in a process whereby the frame of the closed hood, and the hood itself, as otherwise shown in Figure 14, can be flexed into a folded position.

25 Figure 16 shows a second stage in the process whereby the frame of the closed hood, and the hood itself, as otherwise shown in Figure 14, can be flexed into a folded position.

30 Figure 17 shows a third stage in the process whereby the frame of the closed hood, and the hood itself, as otherwise shown in Figure 14, can be flexed into a folded position.

Figure 18 shows a fourth and final stage in the process whereby the frame of the closed hood, and the hood itself, as otherwise shown in Figure 14, can be flexed into a folded position.

Figure 19 illustrates how the folded hood and frame of Figure 18 can be parked within a pouch or otherwise covered when the hood is not required.

Figure 20 shows another embodiment of a hood where the frame is supported by straps.

Figure 21 shows detail of the strap attachments, otherwise seen in Figure 20.

Figure 22 shows further detail of the strap attachments, otherwise seen in Figures 20 and 21

Figure 23 shows a first view of the detail of the hinge arrangement on one side of the frame of the hood.

Figure 24 shows a second view of the detail of the hinge arrangement on one side of the frame of the hood.

Figure 24A shows a more complete view of the detail of the hinges, support for the hood on the rear of the garment and strap attachments.

Figure 25 shows a side view of an attachment whereby a removeable hood can be attached to a garment not otherwise provisioned for accepting attachment of a hood.

Figure 26 shows a transverse view of the attachment of Figure 25.

Figure 27 illustrates how an attachment is used to allow the frame of a hood to be attached.

And

Figure 28 shows, from the side, how the attachment is used to secure a hood to the garment.

Attention is first drawn to Figure 1 showing a side view of a first embodiment of the present invention. A hood 10 comprises a skin 12 in this case being of transparent or semi-transparent polymer sheet. The skin 12 can equally be formed of fabric, or any other flexible and preferably waterproof membrane.

A rigid frame 14 comprises a main member 16 and, in this example, two secondary members 18. A pair of hinges 20 is provided, one on either side of a collar 22 of a garment 24. The main member 16 is arcuate and attached, at each end to one of the hinges 20. The main member 16 is pivotable about the hinges 20 as indicated by arrow 26.

The main member 16 comprises a pair of pivots 28 between which each of the secondary members 18 is attached. The secondary members 18 are free to rotate about the pivots 28 as indicated by arrows 30.

The main member 16 and the secondary members 18 are attached to their relevant positions on the skin 12 so that, as the main member 16 and the secondary members 18 are moved to the position shown in Figure 1, the skin 12 is also moved to assume an extended position protecting the top, sides and rear of the user's head.

The hood 10 is shown in Figure 1 in a first position, the first up position where the hood is in use.

Figure 2 shows the hood of Figure 1 in the up position, viewed from the front. Figure 3 shows an oblique front view of the hood 10, in the up position, as otherwise shown in Figures 1 and 2. Figure 4 shows the hood of Figures 1, 2 and 3 in the up position, viewed from the rear.

When in the up position the main member 16, the secondary members 18 and the skin 12 are held at a distance from the head of the user so that any style hair, or head attachment is not fouled by the main member 16, the secondary members 18 or the skin 12.

Attention is next drawn to Figure 5 showing details of the mechanism of the hinge 20 as used in the first embodiment shown in Figures 1, 2, 3 and 4.

5 The hinge 20 supports the main member 16 to rotate about a centre 32 partially enclosed, at its distal end, by a locating sleeve 34. The main member 16 moves about the centre 32 as indicated by arrow 36. When in the up position, as shown in Figures 1, 2, 3 and 4, the distal end of the main member 16 is urged into a locating recess 38
10 within the locating sleeve 34, the locating sleeve 34 being substantially circular in section. The locating recess 38 retains the main member 16 in the up position and the pivot 28 supports the movement of the secondary members 18, as pulled into position by the skin 12 to which the secondary members 18 are attached, to the
15 positions shown.

Figure 6 shows a detailed close up view of the hinge 20, otherwise shown in Figures 1, 2, 3, 4 and 5.

20 The hinge 20 is affixed by a metal stud 40 to the collar 22 on the garment 24. The main member 16 is urged by a spring 42 towards the locating recess 38 which it enters when the hood 10 is in the up position as shown in Figures 1, 2, 3 and 4. To collapse the hood 10, the main member 16 is simply urged to compress the spring 42 so
25 that the main member may be rotated towards the down position (explained hereafter) within the locating sleeve 34.

The hinge 20 is shown irremovably attached to the collar 22 of the garment 24 by a stud 40. The hood 10 could equally well be attached
30 to the collar 22 by removable and re-attachable means, such as one or more buttons, hooks or press stud fixings.

Attention is next drawn to Figure 7 showing how the main member 16 rotates within the locating sleeve 34 between the up position 44,
35 through intermediate positions 46 to a down position 48.

Figure 8 shows the hood 10, otherwise shown in Figures 1, 2, 3 and 4, in the down position 48 where the main member 16 has been rotated to the down position 48 as indicated by arrow 50 where the skin 12 is in a collapsed state, disposed against the back 51 of the garment 24.

Figure 9 shows the hood of Figure 8, in the down position, viewed obliquely from the rear, and Figure 10 shows the hood, in the down position, of Figures 8 and 9 viewed directly from the rear.

Attention is drawn to Figure 11, showing a side view of a second embodiment of the invention, which does away with the need for the hinge 20.

A first member 52 is pivoted on a second member 54 by a pair of pivots 28. The second member 54 is held in a loop 56 on the collar 22 of a garment 24. In Figure 11, the hood 10' is shown in the up position. When in the up position, the first member 52 and the second member 54 co-operate to support the skin 12 to be spaced away from the head of a user and to offer protection to the top, sides and rear of the user's head.

Attention is drawn to Figure 12, which shows a front view of the second embodiment, otherwise shown in Figure 11, with the hood in the up position, and illustrates details of the means whereby the hood 10' is kept in the up position. Tie cables 58 pass through eyes 60 on either side of the collar 22 and are attached to the lower end of the first member 52. Toggles 62 can be moved on the tie cables 58 to be locked in position. To raise the hood 10' into the up position, as shown in Figures 11 and 12, the tie cables are pulled until either the lower ends of the first member 52 contact the eyes 60, or the hood 10' is sufficiently raised. The toggles 62 are then moved on the tie cables 58 to be in contact with the eyes 60 and thereby hold the hood 10' in the up position. To return the hood 10' to a down position, the toggles 62 are simply released to allow the tie cables 58 to slide back through the eyes 60 to allow the hood 10' to assume a down position.

Figure 13 shows a side view of the hood 10' in the down position where the first member 52 and the second member 54 are in substantial alignment with each other and lie against the back 51 of the garment 54 with the skin 12 in a non-expanded condition.

Figure 14 shows the view of Figure 13, but this time obliquely from the back of a garment.

The loop 56 can be openable, so that the hood 10' can be removed from the garment 24 by the further process of either releasing the eyes 60 or removing the toggles 62 to allow the tie cables 58 to be slid through the eyes 60. However, as an alternative, Figures 15, 16 and 17 hereafter show how the second embodiment of a hood 10' shown in Figures 11, 12, 13 and 14 can fold to be stowed on the rear of the garment.

Attention is next drawn to Figure 15 showing a first stage in the process whereby the frame of the closed hood and the hood itself, as otherwise shown in Figure 14, can be flexed into a folded position. The first member 52 and the second member 54 are hinged, relative to one another, to be exactly in registration one with the other.

Attention is next drawn to Figure 16, showing a second stage in the process whereby the frame of the closed hood, and the hood itself, can be flexed into the folded position. The frame 14' is not rigid in the embodiment shown in Figures 14 and 15, and is, instead, made from an elastically flexible material. Examples of suitable material would be plastic strip, spring steel and so on. The frame is pushed in from one side, as indicated by arrow 64 so that the depressed side moves towards the centre of the frame 14'.

Attention is next drawn to Figure 17, which shows a third stage in the process otherwise shown in Figures 15 and 16. When a sufficient amount of frame 14 has been urged towards the centre of the frame by the process shown in Figure 16, the urged-in material is twisted as illustrated by arrow 65 to form three flat substantially concentric

circular loops 66, better shown in Figure 18. The resulting folded frame 14' is substantially one-third the diameter of the frame as it is shown in Figure 15. The exact process, summarised, starting with Figure 15 and ending with Figure 18 is as follows. The first member 52 and the second member 54 are brought together and can comprise a fixing mechanism to hold them in position, though this is not necessary. Next, the frame 14' is twisted clockwise, from the bottom 68 (shown in Figure 15) and is progressively twisted and pushed upwards until it forms three flat loops 66 for storage.

Figure 19 shows how the folded hood and frame of Figure 18 can be packed away into a zip pocket 70 or other like enclosure, at the back of the garment 24.

Attention is next drawn to Figure 20 showing another embodiment of a hood 10'' employing straps to support the frame.

The hood 10'' has its first member 52 attached to the garment 24 by straps 72, the hood 10'' being substantially the design shown in Figures 11, 12, 13 and 14.

The strap 72 passes through a buckle 74 on either side of the collar 22 of the garment 24. Each buckle 74 is attached to the collar 22 by means of a stud 76 which can either pass entirely through the collar 22 or can be sewn or otherwise attached to the surface of the collar 22.

Attention is drawn to Figure 21, showing greater detail of the buckle 74 and the attachment of the strap 72 to the first member 52.

The strap 72 is made, for preference, from fabric. However, the strap 72 may equally be fabricated from woven polymer or leather. The strap 72 is affixed to the end of the first member 52 by passing through a strap hole 78, at the end of the first member 52, and being sewn or otherwise attached to itself to retain the strap 72 in the strap hole 78. A press stud or popper 80, also proximate to the end of the first member 52, is otherwise employed to attach the

first member 52 to the second member 54 in the situation shown in Figure 15.

The strap 72 passes through the buckle 74 which is free to rotate about the stud 76 to assume whatever angle is necessary to support the hood 10'' in the up position and to allow the hood 10'' to be moved to the down position. The buckle 74 comprises a base member 82 for attachment to the stud 76 and also supports a securing member 84 which can be rotated as indicated by arrow 86 to an open position where the strap 72 may be moved within the buckle 74 as indicated by arrow 88 (Figure 20) or allowed to return, preferably under spring loading, to a closed position (illustrated in Figure 21) where teeth 90 grip the strap 72 and hold the strap 72 in place.

Attention is next drawn to Figure 22 showing details of how the hood 10'' of Figures 20 and 21 is attached to the rear of the garment 24. The first member 52 and the second member 54 are shown substantially in the position otherwise seen in Figure 15, and show how the poppers 80 hold the first member 52 in registration with the second member 54.

The second member 54 comprises an attachment loop 92 which passes through a sleeve 94 in the rear of the collar 22 of the garment 24. The attachment loop 92 corresponds to the loop 56, otherwise shown in Figures 13 and 14. The attachment loop 92 may be continuous in construction, and the sleeve 94 sewn or otherwise attached on the further side thereof to cause the hood 10'' to form a permanent fixture on the garment 24. Otherwise, the sleeve 94 can be permanently sewn, and the attachment loop 92 discontinuous so that the second member 54 can be moved from side to side against the pliability of the fabric of the sleeve 94 to allow the ends of the attachment loop 92 to reside within, or be removed from, the sleeve 94. As an alternative, the attachment loop 92 can be of continuous construction, and the sleeve 94 removably affixed to the far side by one or more press studs, poppers, hooks and eyes or by velcro. This last arrangement allows the hood 10'' to be detachable from the garment 24.

Attention is drawn to Figure 23 which shows how the first member 52 and the second member 54 of Figure 22 are linked together by clip fastenings 96, on either side of the hood 10'', which allows the first member 52 and the second member 54 to pivot independently of one another.

Attention is drawn to Figure 24, which shows further detail, from the side, of the clip fastening arrangement 96 of Figure 23.

Attention is next drawn to Figure 24A which shows better detail of the hood 10'' of Figure 20, and particularly illustrates the inter-relationship between the various parts.

When closing the hood 10'' the poppers 80 on the first member 52 and the second member 54 are brought into alignment with each other and depressed to close. The straps 72 then find themselves in a convenient stowed position. The disposal of the clip fastenings 96 relative to the garment 24, the sleeve 94, the first member 52 and the second member 54 are all clearly shown. In Figure 24A the attachment loop 92 is shown as being of continuous construction, the portion lying within the sleeve 94 being represented in dotted line.

Thus far, the hood 10'' has been shown in a form which is essentially integral with a garment 24. Both the rigid frame hood 10 and the flexible frame hoods 10' 10'' can be manufactured and sold as independent items which can be attached, virtually to any garment and, when not required, detached from that garment.

To enable this to happen, attention is drawn to Figure 25 which shows a spring clip 98 which can be clipped to the collar 22 of a garment 24 and opened and closed as indicated by arrow 100, the spring clip 98 comprises a stud attachment 102 about which the frame of a hood 10, 10', 10'' is free to swivel as indicated by arrow 104 when attached to the spring clip 98.

Figure 26 shows a side view of the spring clip 98 of Figure 25, illustrating how a spring 106 urges the spring clip 98 into the closed position. In the example here given, the spring clip 98 is shown attached to the hinge 20 of the rigid frame 14 illustrated in Figures 1 to 10. It is to be appreciated that the spring clip can attach, via its stud attachment 102, any portion of any style of frame connected with the present invention.

Figure 27 shows the spring clip of Figure 26 more clearly attached to the hinge 20. The hinge 20 comprises a press stud, popper or other means whereby it can be attached to the stud attachment 102 and be free to rotate thereabout.

Finally, attention is drawn to Figure 28 which shows how a detachable hood 10, similar to that shown in Figure 1, can be affixed to a garment 24 by means of a minimum of three spring clips 98. A spring clip 98 is provided on either side of the collar 22 of the garment 24 and a further spring clip 98 is provided at the rear of the collar 22 of the garment 24. The hood 10 is then attached to the garment 24 by affixing to the stud attachments 102 on each of the spring clips 98, and the hood 10 and the clips 98 removed when not required.

Figures 25 to 28 show a hood 10 where the hood itself is attached to the spring clips 98. It is within the scope of the invention that the spring clips 98 can be integral with the hood 10 so that the hood 10 can be clipped, as a unit, to the garment 24 and/or to the collar 22.

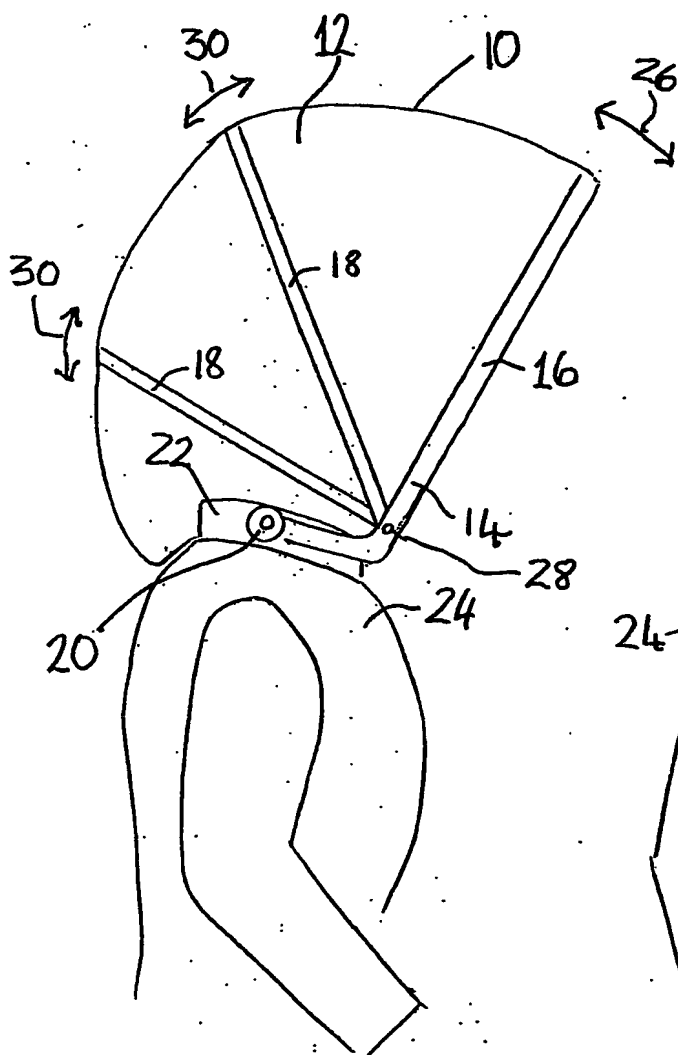


FIGURE 1

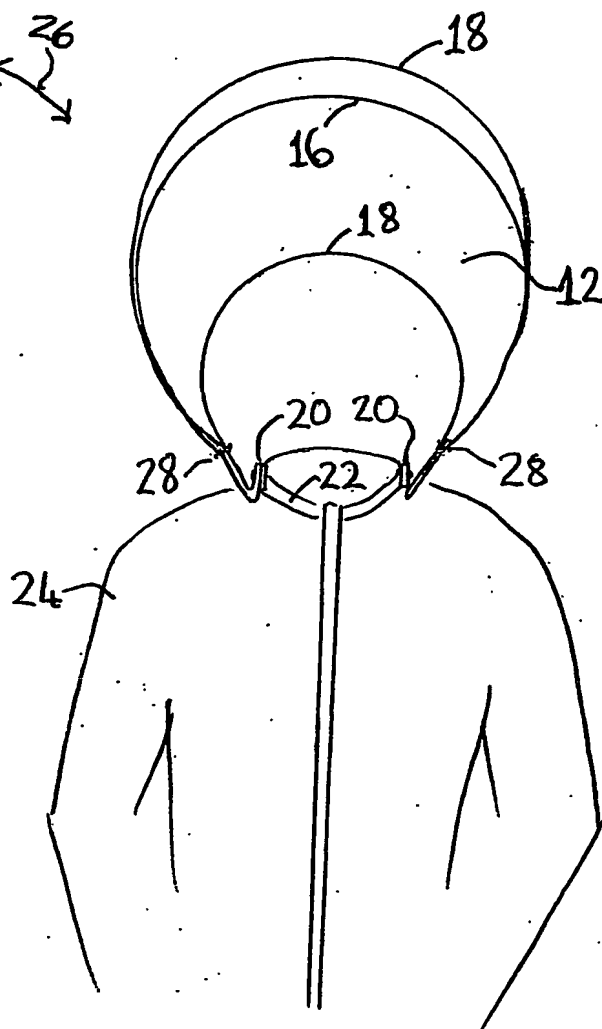


FIGURE 2

2/11

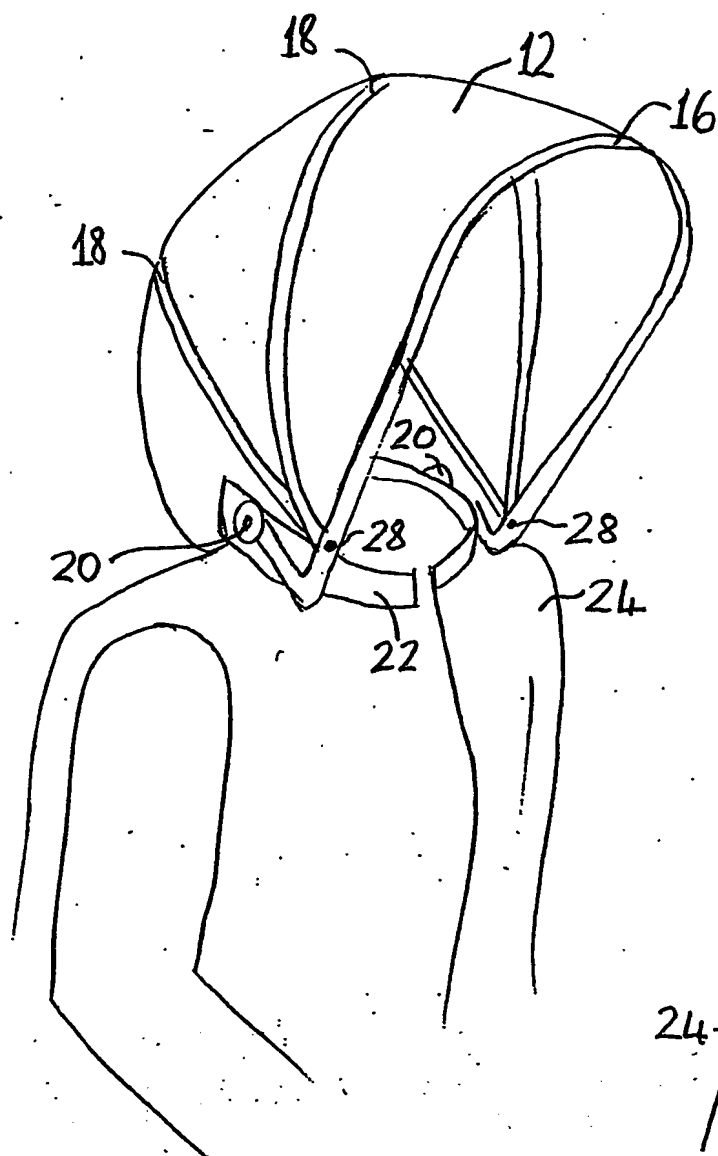


FIGURE 3

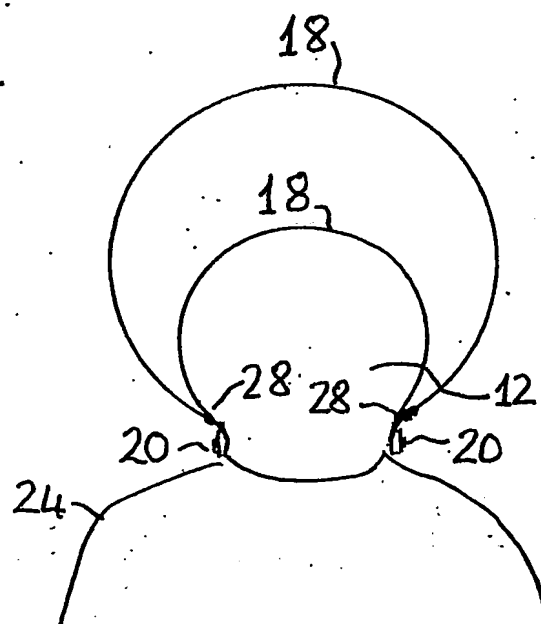


FIGURE 4

3/11

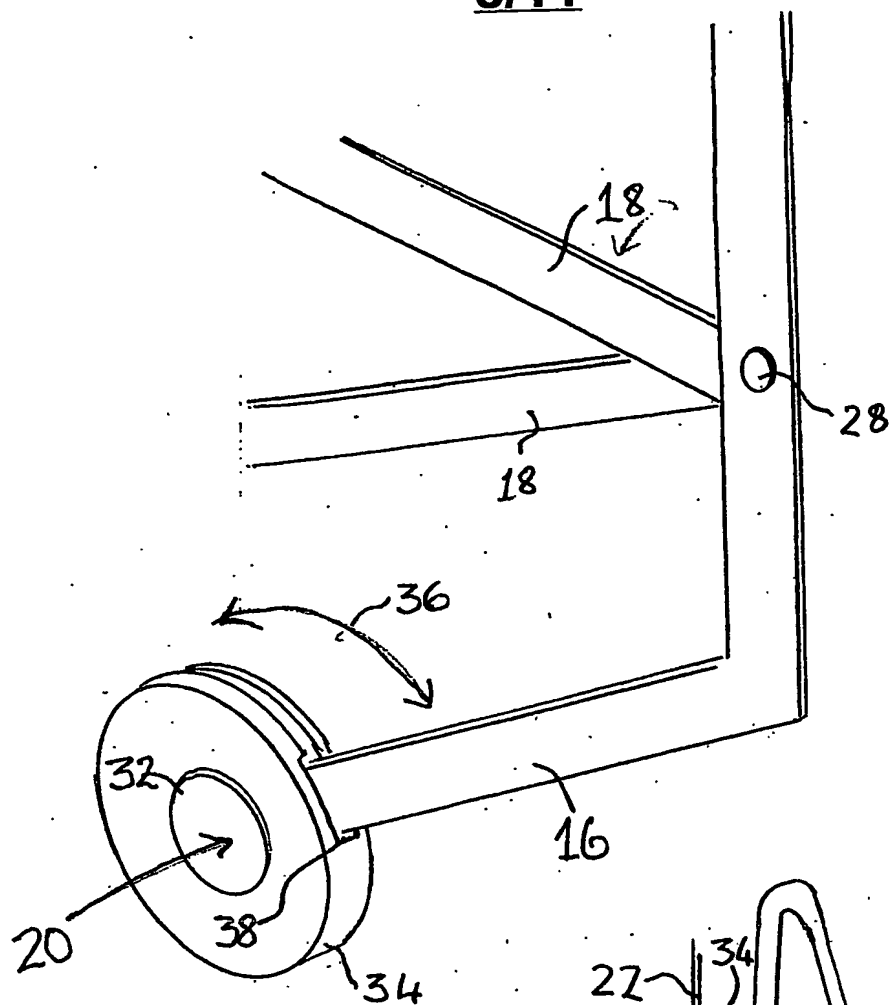


FIGURE 5

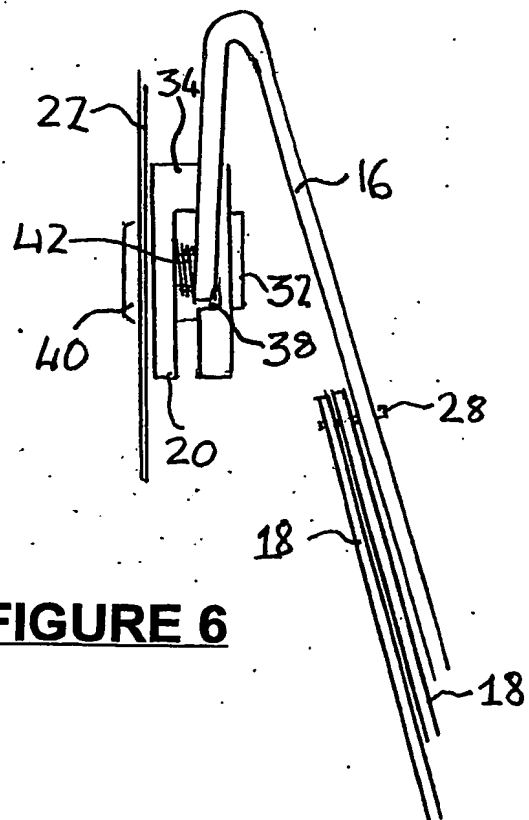


FIGURE 6

4/11

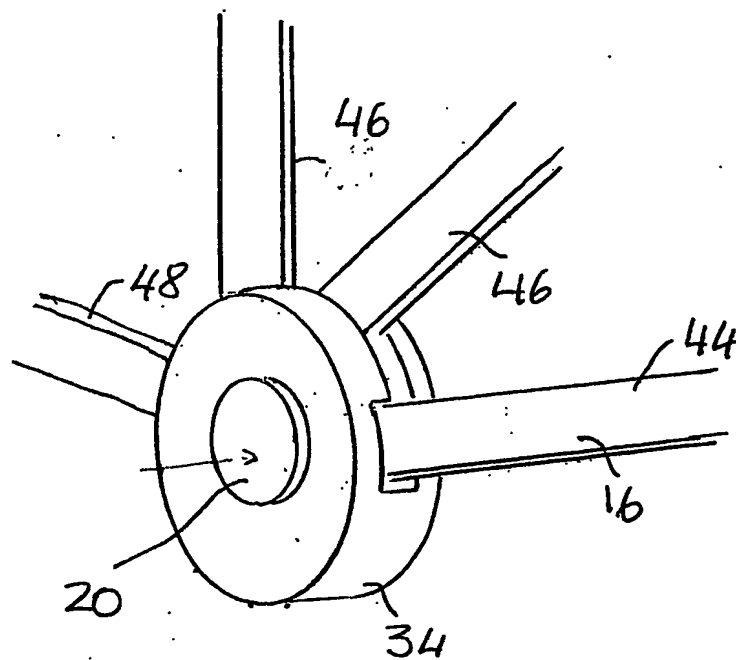


FIGURE 7

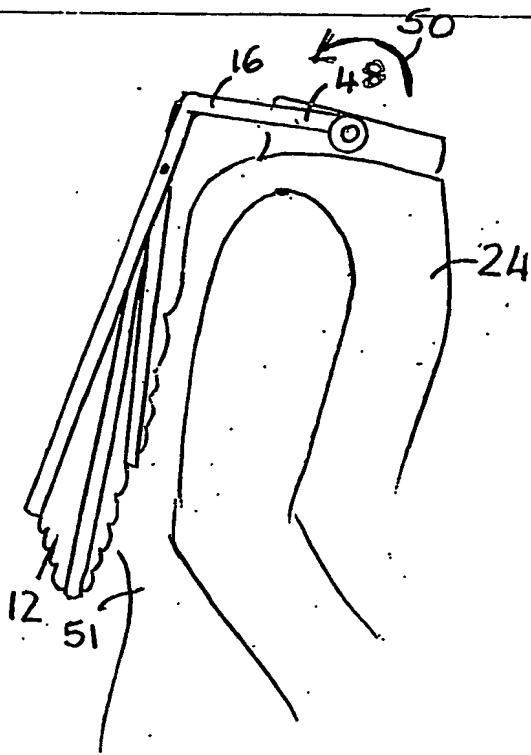


FIGURE 8

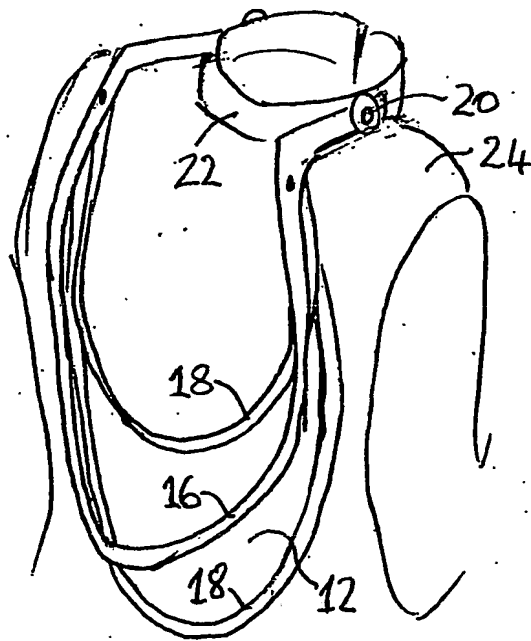


FIGURE 9

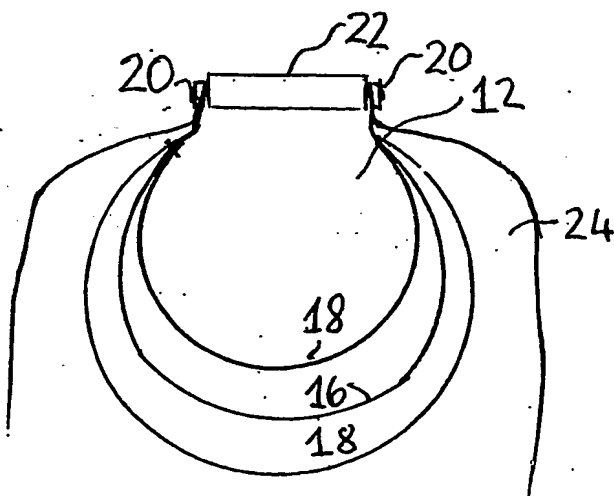


FIGURE 10

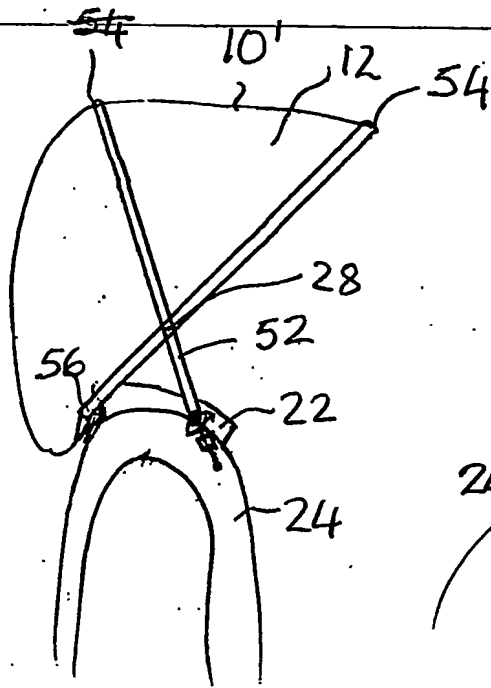


FIGURE 11

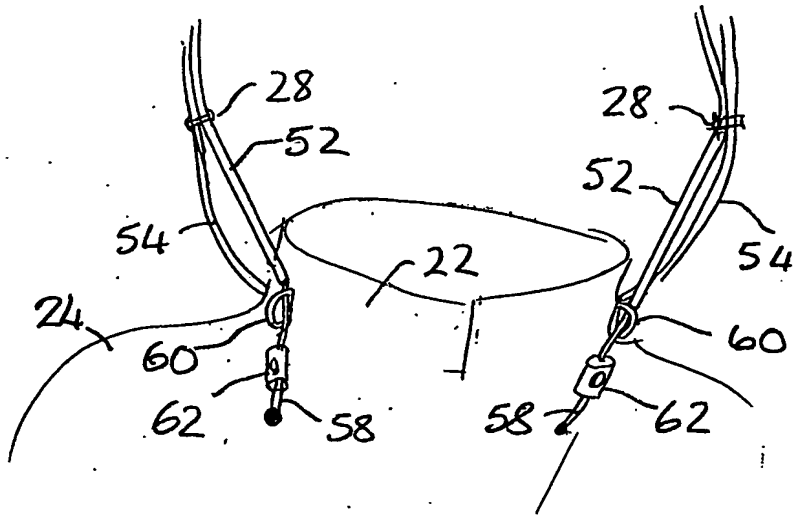


FIGURE 12

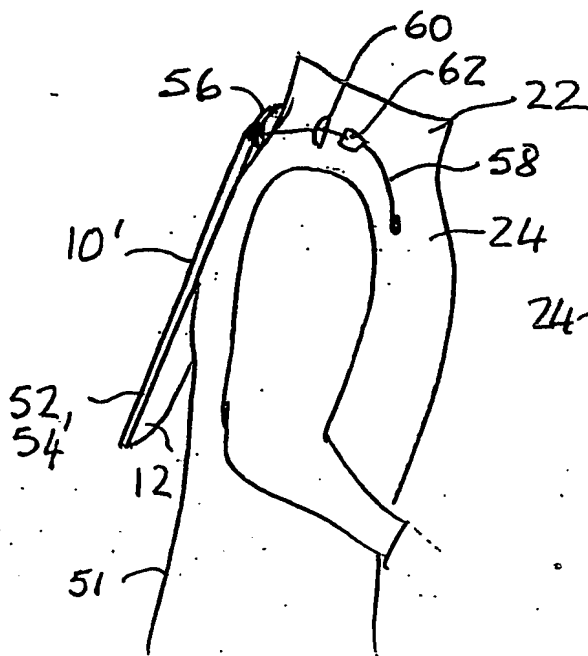


FIGURE 13

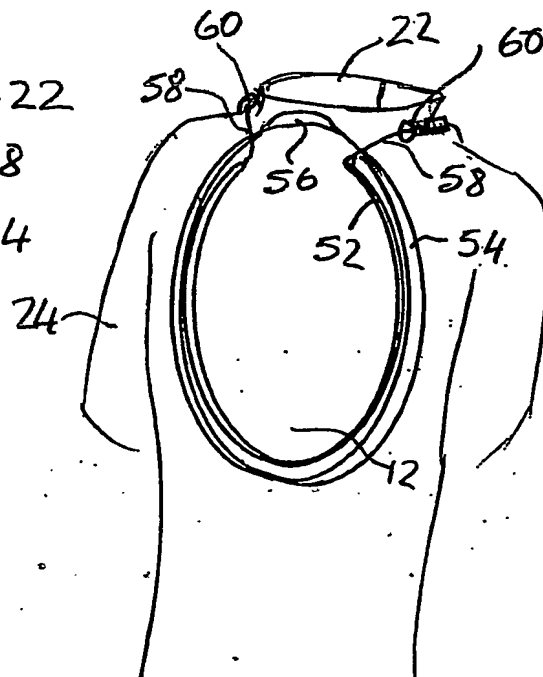


FIGURE 14

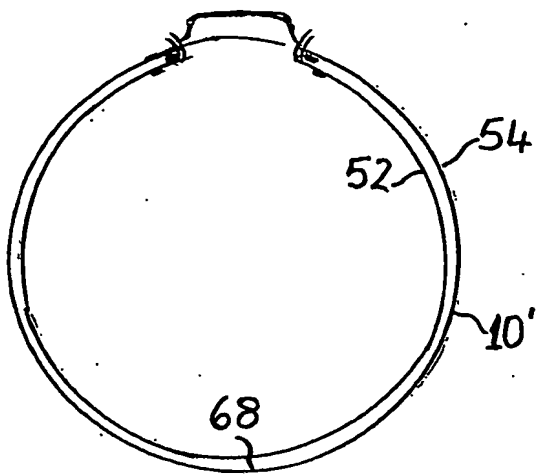


FIGURE 15

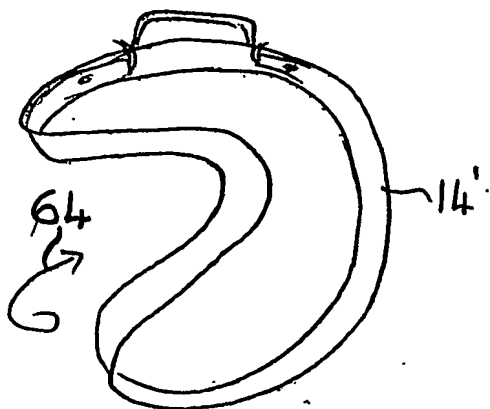


FIGURE 16

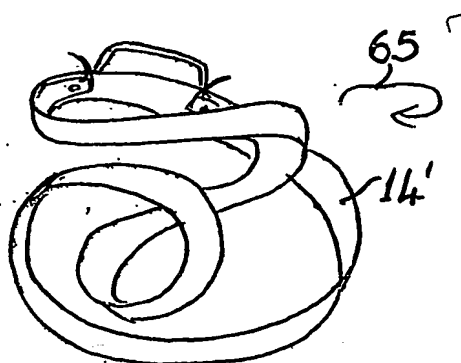


FIGURE 17

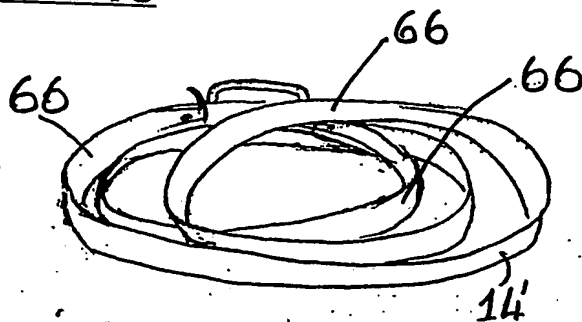


FIGURE 18

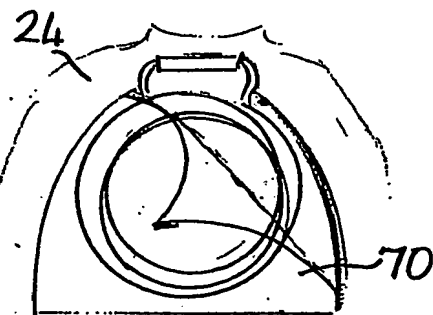


FIGURE 19

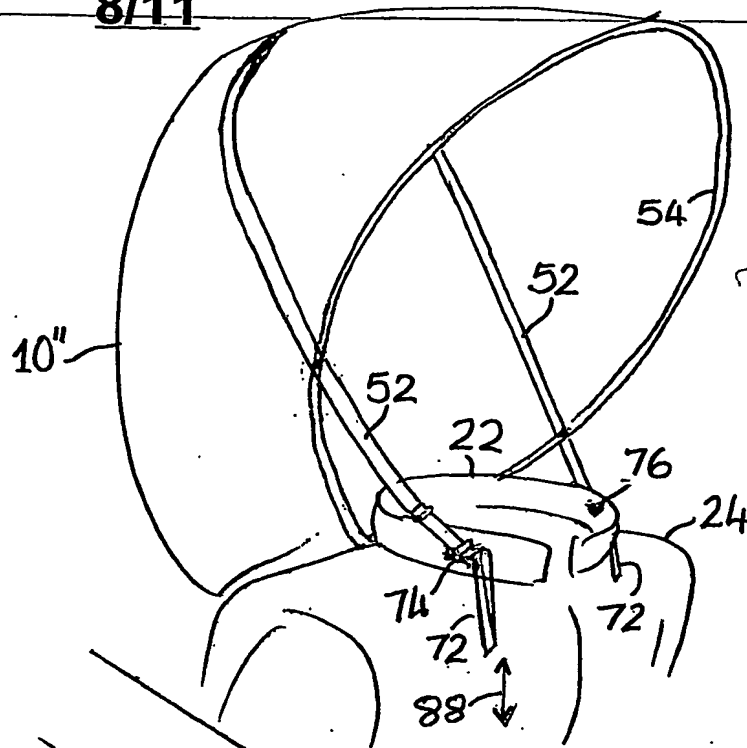


FIGURE 20

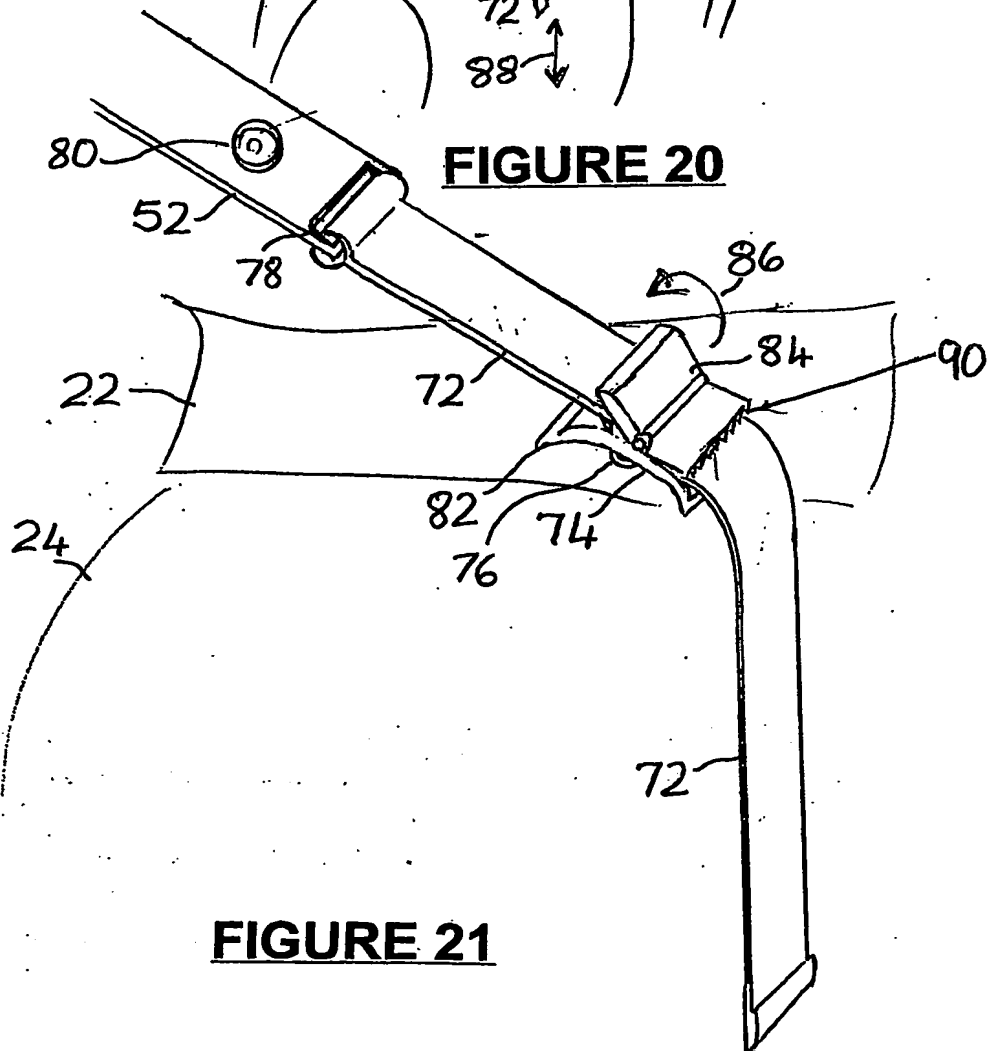


FIGURE 21

9/11

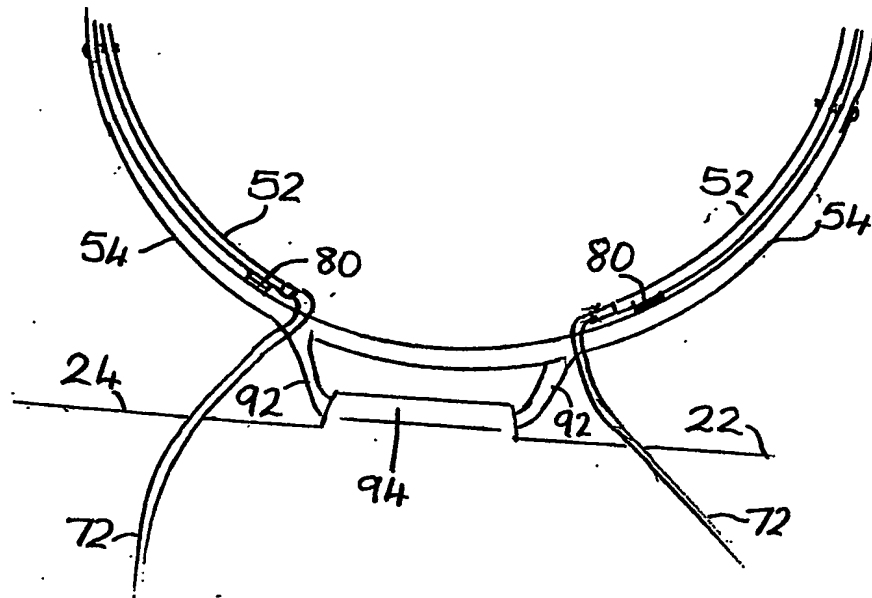


FIGURE 22

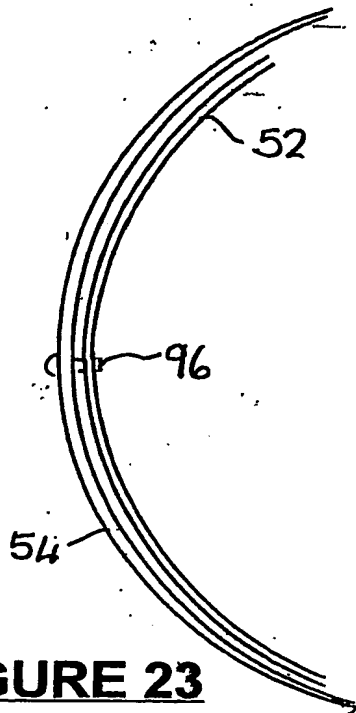


FIGURE 23

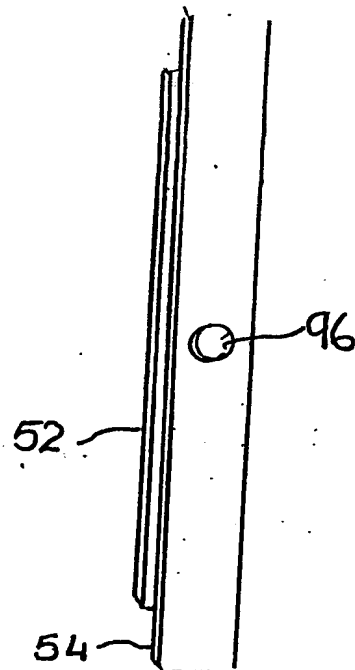


FIGURE 24

10/11

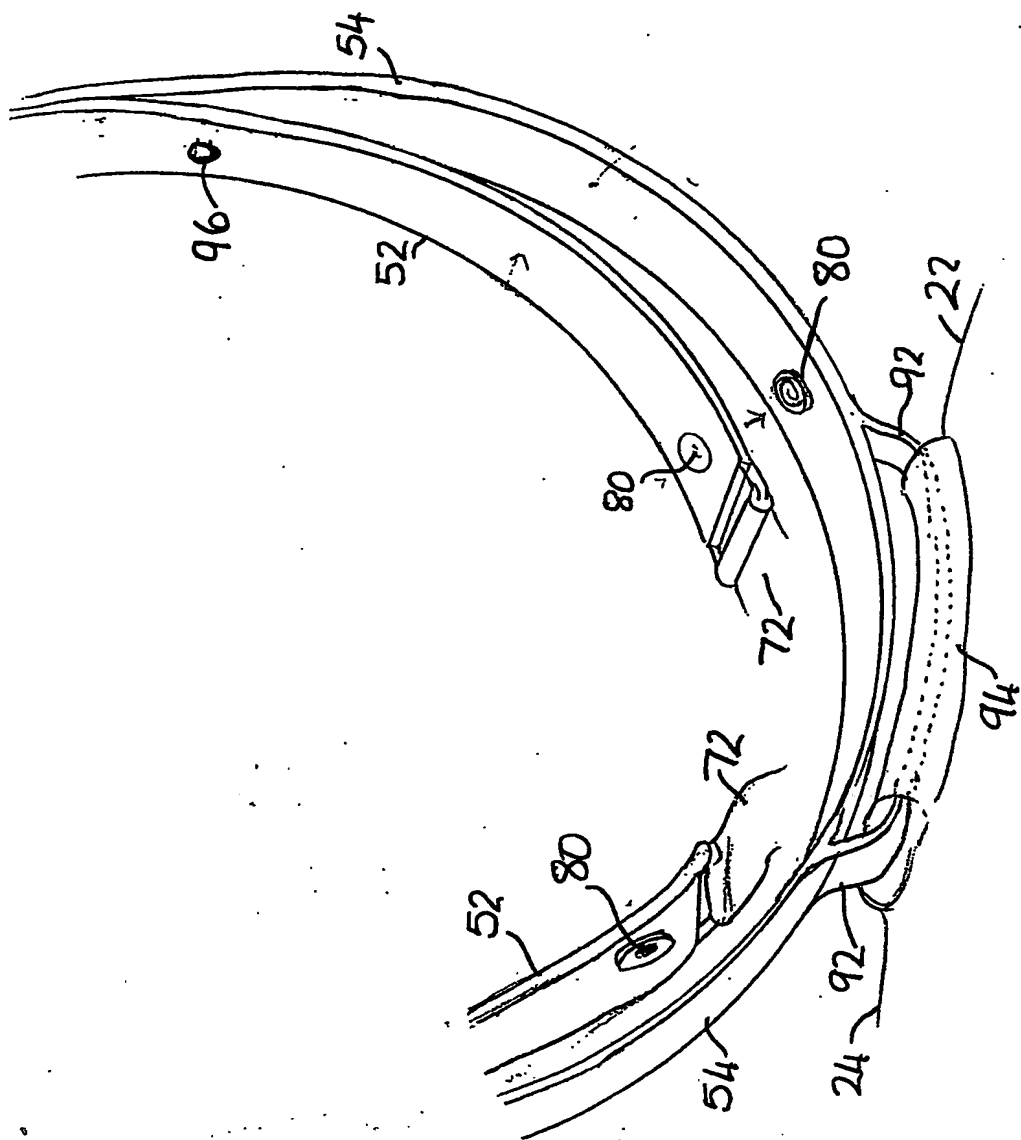


FIGURE 24A

11/11

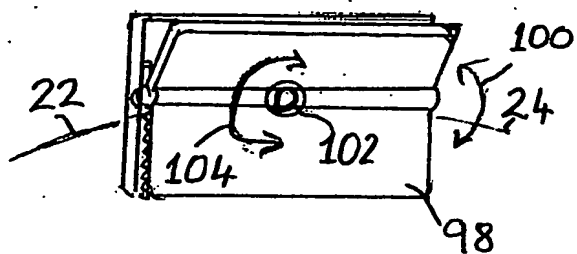


FIGURE 25

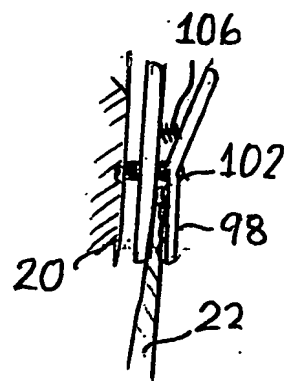


FIGURE 26

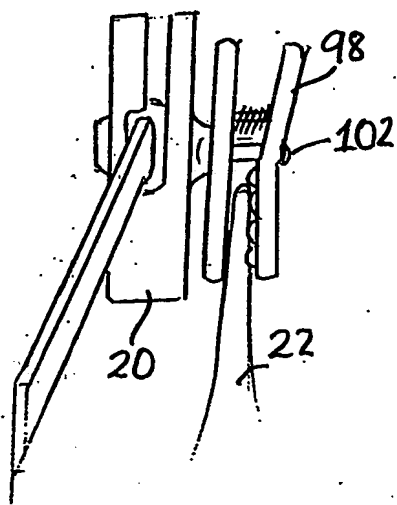


FIGURE 27

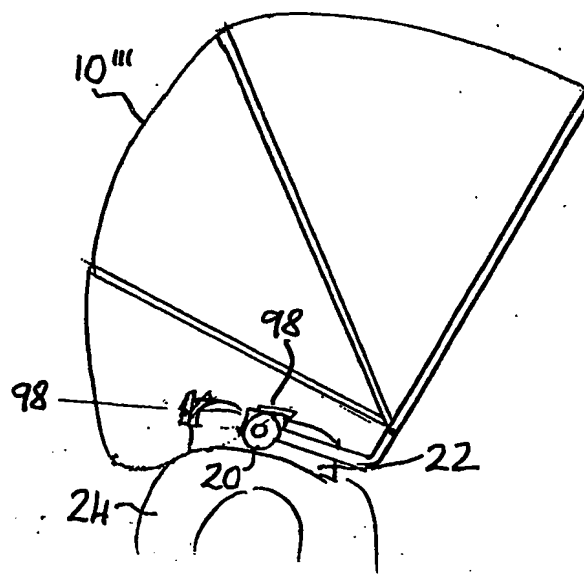


FIGURE 28

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